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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,527

10/24/2003

Piero Perlo

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EXAMINER

NG, EUNICE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/691,527	Applicant(s) PERLO ET AL.	
	Examiner Eunice Ng	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed 5/25/07, Applicants have submitted an Amendment, filed 9/7/07, amending claims 1, 2, 6 and 7, adding new claims 8 and 9, without adding new matter, and arguing to traverse claim rejections.

Response to Arguments

2. Applicant's arguments, see Remarks, pp. 7-12, filed 9/7/07, with respect to the rejection(s) of claim(s) 1-7 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of copending Application No. 10/508,794 and DeVito, below.

Specification

3. The Specification is objected to because the term "voice recognition" is misused for what nowadays is called --speech recognition-- in the speech signal processing art. While "voice recognition" and "speech recognition" were both once used interchangeably to refer to spoken word recognition, nowadays these two terms are distinguished. The term "voice recognition" now denotes identification of *who* is doing the speaking (class 704/246), while "speech recognition" (or "word recognition") denotes identification of *what* is being said (class 704/251). So, appropriate correction to the proper terms of art is required.

Claim Objections

4. Claims 1, 4 and 5 are objected to because of the following informalities: In line 13 of claim 1, line 2 of claim 4, and line 1 of claim 5, "voice recognition" should be --speech recognition--, as discussed above. Appropriate correction is required.

5. Claims 8 and 9 are objected to because of the following informalities: In line 5 of claim 8, "behaviours" should be --behaviours-- or --behaviors--. Lines 4-5 of claim 8 recite, "in terms of stimuli, feelings, events, actions, [behaviors]" which does not clearly indicate "and" or "or" combinations. The examiner has interpreted this to mean --in terms of stimuli, feelings, events, actions, and/or behaviors--.

In lines 18-19 of claim 8, "which can directly reach the animal's brain" is intended use which itself has not been recited. The examiner suggests changing this to --which are sent directly to the animal's brain--.

Claim 9 is missing a period at the end of the sentence. Appropriate correction is required.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/508,794 in view of DeVito.

This is a provisional obviousness-type double patenting rejection.

In claim 1 of the instant application: "sensor means designed to be positioned on an animal for converting pulses detected on the animal's body into electric signal indicating a status of said animal" (lines 3-5 of the claim), corresponds to claim 1 of Application No. 10/508,794, "a matrix of sensors to be positioned on the animal...for converting stimuli detected on the body of [the] animal into first electric signals which are indicative of a status of the animal" (lines 3-5 of the claim); "processing means operatively associated with the sensor means, comprising memory means into which human voice messages corresponding to different status of the animal are recorded" (lines 6-8 of the claim), corresponds to claim 1 of Application No. 10/508,794, "processing means associated with the matrix of sensors including memory means in which human vocal messages are recorded corresponding to various status of the animal" (lines 6-8 of the claim); "loudspeaker means operatively connected to the processing means, the processing means receiving the electric signals coming from said sensor means and activating said loudspeaker means in order to issue a voice message selected in said memory means, in function of the aforeseaid electric signals received" (lines 9-12 of the claim), corresponds to claim 1 of Application No. 10/508,794, "a loudspeaker operatively connected to the processing means, said processing means being provided for receiving the first signals coming from the sensors and for activating said loudspeaker in order to emit a human vocal message selected in said memory means, depending upon the received first signals" (lines 9-13 of the claim); "[speech] recognition means for sending to the processing means signal representing the content of voice messages

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uttered by a human user (lines 13-14 of the claim), corresponds to "[speech] recognition means [for sending] second signals to the processing means, which are representative of the contents of vocal messages" (lines 15-16 of the claim); and "pulse-generating means which receive from said processing means said signals representing the content of the voice messages uttered by the human user, and which send to the animal's brain corresponding pulses" (lines 15-17 of the claim), corresponds to "stimuli generating means operatively associated to the body of the animal...which receive said second signals from the processing means and send corresponding stimuli to the [animal's] brain, so as to induce the animal to take determined actions or perceive determined feelings" (lines 17-20 of the claim).

Application No. 10/508,794 does not specifically teach electroencephalographic and electromyographic sensors, but DeVito teaches wherein said processing means includes a neural network control system, said sensor means comprises first and second electroencephalographic sensors and an electromyographic sensor (abstract, DeVito teaches "bioelectrical signals such as (EEG [electroencephalographic] and EMG [electromyographic]) for the control of systems").

It would have been obvious for one of ordinary skill in the art at the time the invention was made to include the teaching elements of DeVito because "Sensed physiological parameters, and in particular bioelectrical signals...such as brain waves (EEG) and muscle signals (EMG) have been used to control electrical devices" and constitute readily available technology (col. 1, ll. 43-47), as indicated by DeVito. DeVito also teaches, "A table of baseline values for the control parameters may be generated representing the baseline activity for the subject...animal...allows particular states of mind, emotions, or other responses to be identified and converted to command code signals to control a given system" (col. 10, ll. 21-30).

Claim 1 in the instant application recites, "at least the first and second encephalographic sensors are placed close to respective ears of the animal, or close to its occipital-temporal region,

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and the electromyographic sensor is placed on the animal's neck, and said pulse-generating means send radioelectric waves directly to the animal's brain" (lines 24-28 of the claim), which corresponds to claim 1 of Application No. 10/508,794, "a matrix of sensors to be positioned on the animal, in particular on its head and/or its neck" (lines 3-5 of the claim) and "send corresponding stimuli to the [animal's] brain" (lines 17-20 of the claim).

As per Claims 2-7 of 10/691,527, their limitations are directed to similar subject matter as Claims 2-9 of 10/508,794, and are not patentably distinct under rationale similar to those discussed above with respect to claim 1.

Claim 8 in the instant application corresponds to claim 10 of Application No. 10/508,794 since all the limitations of claim 8 of this application are also present in claim 10 of Application No. 10/691,527. However, claim 1 in this application is broader and thus generic in scope since it omits the limitation, "whereby the animal is brought to develop its own language in time with an evolutive process...its reactions to the environment" (lines 15-19 of the claim).

Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to broaden the scope of the claims. As noted in *In re Goodman*, 29 USPQ2d 2010 (1993), "Application claims were properly rejected, absent terminal disclaimer for applicant's existing patent, for obviousness-type double patenting, since application claims are generic to species of invention covered by patent claim, and since without terminal disclaimer, extant species claims preclude issuance of generic application claims."

In claim 8 of the instant application: "detecting on the body of the animal electric pulses in the animal's brain, muscles and/or nerves, which are indicative of a status of an animal in terms of stimuli, feelings, events, actions [or behaviours], including those shown by the motion of the animal's muscles" (lines 2-5 of the claim), corresponds to claim 10 of Application No. 10/508/794, "stimuli which are indicative of a status of an animal in terms of feelings, events

actions thoughts wishes or behaviours, are detected on the body of the animal" (lines 3-4 of the claim); "converting the detected pulses into first electric signals which are sent to processing means" (lines 6-7 of the claim), corresponds to claim 10 of Application No. 10/508/794, "the detected stimuli are converted into [first electric] signals, which are sent to processing means"; "selecting by the processing means a stored human-type vocal message corresponding to received first electric signals and activate as a consequence a loudspeaker for emitting a selected human-type vocal message, thus simulating the possibility of speaking for the animal" (lines 8-11 of the claim), corresponds to claim 10 of Application No. 10/508/794, "the processing means selects a stored human-type vocal message corresponding to received first electric signals and activates as a consequence a loudspeaker for emitting a selected human-type vocal message, thus simulating the possibility of speaking for the animal" (lines 7-9 of the claim); "receiving human-type vocal messages in a speech recognition means and sending respective second electric signals to the processing means" (lines 12-13 of the claim), corresponds to claim 10 of Application No. 10/508/794, "[speech] recognition means for receiving human-type vocal messages and for sending respective second electric signals to the processing means"; "generating, by the processing means, stimuli for inducing the animal to take determined actions or perceive determined feelings as a function of the type of the received electric signals, wherein, for the purpose of performing step v) , the received second electric signals are converted into radioelectric waves having different frequencies and amplitudes, which can directly reach the animal's brain" (lines 14-19 of the claim), corresponds to claim 10 of Application No. 10/508/794, "the processing means generates, in function of the type of the received second electric signals, stimuli which are sent to the brain of the animal, so as to induce the latter to take determined actions or perceive determined feelings" (lines 12-14 of the claim).

Claim 9 of the instant application recites, “wherein the animal is brought to develop its own language in time with an evolutive process, through an interactive loop...including the hearing by the animal of the vocalizations it generates...reactions to the environment” (lines 1-4 of the claim), is substantially the same as claim 10, lines 15-19, of Application No. 10/508/794, “whereby the animal is brought to develop its own language in time with an evolutive process, through an interactive loop...including the hearing by the animal of the vocalizations it generates...reactions to the environment.”

Allowable Subject Matter

8. Claims 1-9 are allowable. The following is a statement of reasons for the indication of allowable subject matter:

DeVito teaches in Fig. 19, elements 123-125; col. 2, line 34, “one or more physiological sensors”; col.1, ll. 27-30, teaches, “electrical measurements of physiological parameters, such as brainwaves (EEG) from an animal”; col. 10, ll. 21-28, teaches, “table of baseline values for the control parameters...animal...interacting with the system...baseline values may then be used for comparison with each parameter set calculated from each epoch...results of this comparison allows particular states of mind, emotions, or other responses to be identified and converted to command code signals to control a given system”; and col. 5, ll. 14-16, teaches, “Hook and loop fasteners allow the headband to be snugly fastened around the subject’s head.”

Moore teaches, “stimulus-generating, device is housed in a collar placed around the body of an animal, preferably the neck” (col. 4, ll. 30-32); “modifying animal behavior by sound recognition or activation means coupled to meaningful responsive action” (col. 4, ll. 19-23); and “stimulus-generating means...may be aversive or non-aversive in nature...sound producing

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device...coupled to a recording, or voice stimulation chip, which recording or chip relays verbal commands to the animal” (col. 4, ll. 48-56).

Plotkin teaches a system and method for making live animals appear to talk. Plotkin teaches in col. 2, line 67 – col. 3, line 4, “control circuit and memory...for attachment to collar along with speaker”; col. 4, ll. 12-14, teaches “messages stored in memory comprise of one or more spoken words and may be in any language, accent or voice type”; and in Fig. 2, speaker 30 is positioned near the head of the dog, which would make the output appear to come from the animal. However, Plotkin’s voice messages are pre-recorded and therefore are not converted into signals representing the content of said messages using speech recognition.

Naritoku teaches improving learning in animals by nerve stimulation by applying to the animal’s nerve an electrical stimulation signal having parameter values effective in modulating the electrical activity of the nerve in a manner so as to modulate the activity of preselected portions of the brain; col. 9, ll. 62-64, “retention can be...enhanced by experimental treatments such as electrical brain stimulation.” However, Naritoku’s nerve stimulation does not represent the contents of the vocal messages uttered by a human user.

Thus, none of DeVito, Moore, Plotkin, nor Naritoku, taken alone or in combination, teach, nor fairly suggest in independent claims 1 and 8: “[speech] recognition means for sending to the processing means signals representing the content of voice messages uttered by a human user, and pulse-generating means, which receive from said processing means said signals representing the content of the voice messages uttered by the human user, and which send to the animal's brain corresponding pulses”; nor

“receiving human-type vocal messages in a speech recognition means and sending respective second electric signals to the processing means; and generating, by the processing means, stimuli for inducing the animal to take determined actions or perceive determined feelings

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as a function of the type of the received electric signals, wherein, for the purpose of performing step v) the received second electric signals are converted into radioelectric waves having different frequencies and amplitudes, which [are sent directly to the animal's brain].”

Claims 2-7 further limit claim 1, above, and thus contain allowable subject matter. Claim 9 further limits claim 8, above, and thus contains allowable subject matter.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Peterson et al. (US Patent 6,712,025) teaches a receiver/stimulus unit for an animal control system. Kim et al. (US Patent 7,282,028) teaches a method and apparatus for measuring animal's condition by acquiring and analyzing its biological signals.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eunice Ng whose telephone number is 571-272-2854. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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EN

11/15/07



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